

4.28.7 Ecological Contaminants of Potential Concern

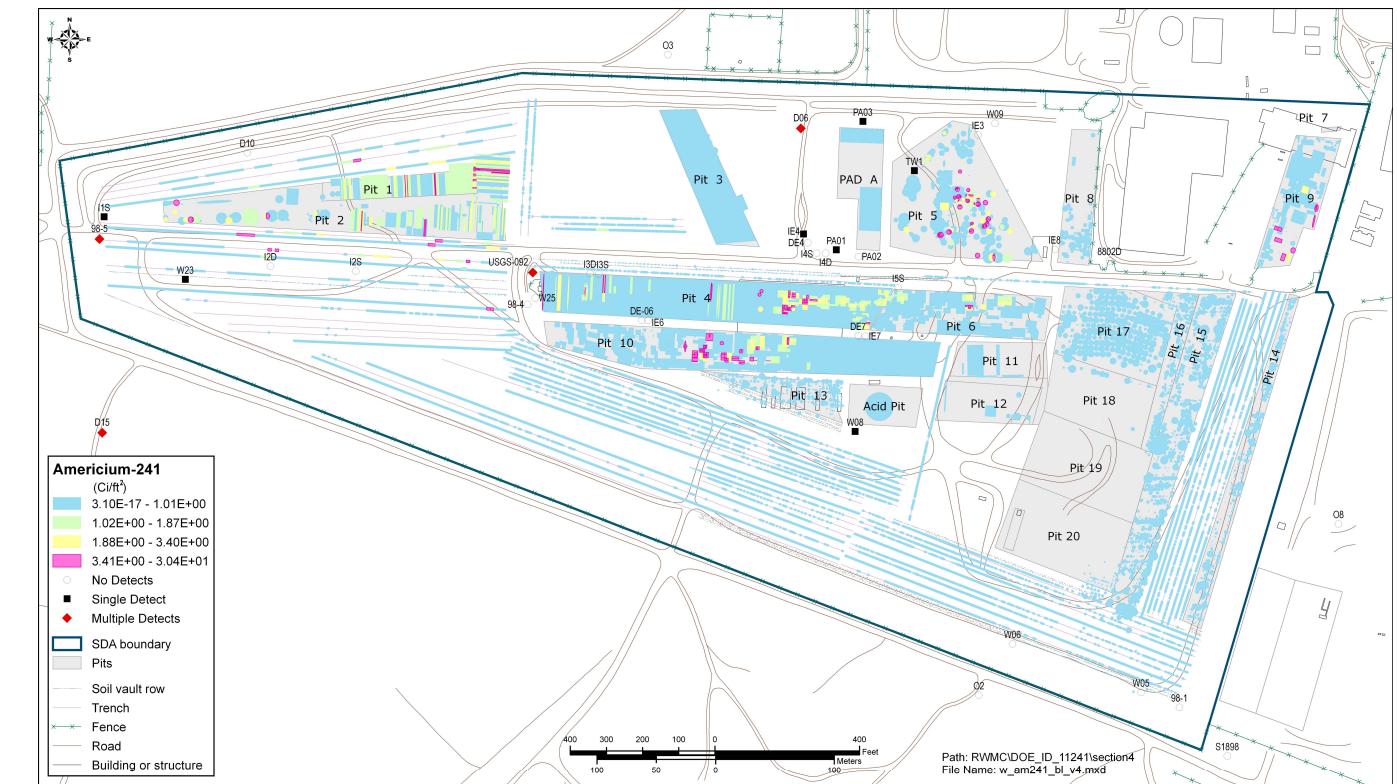
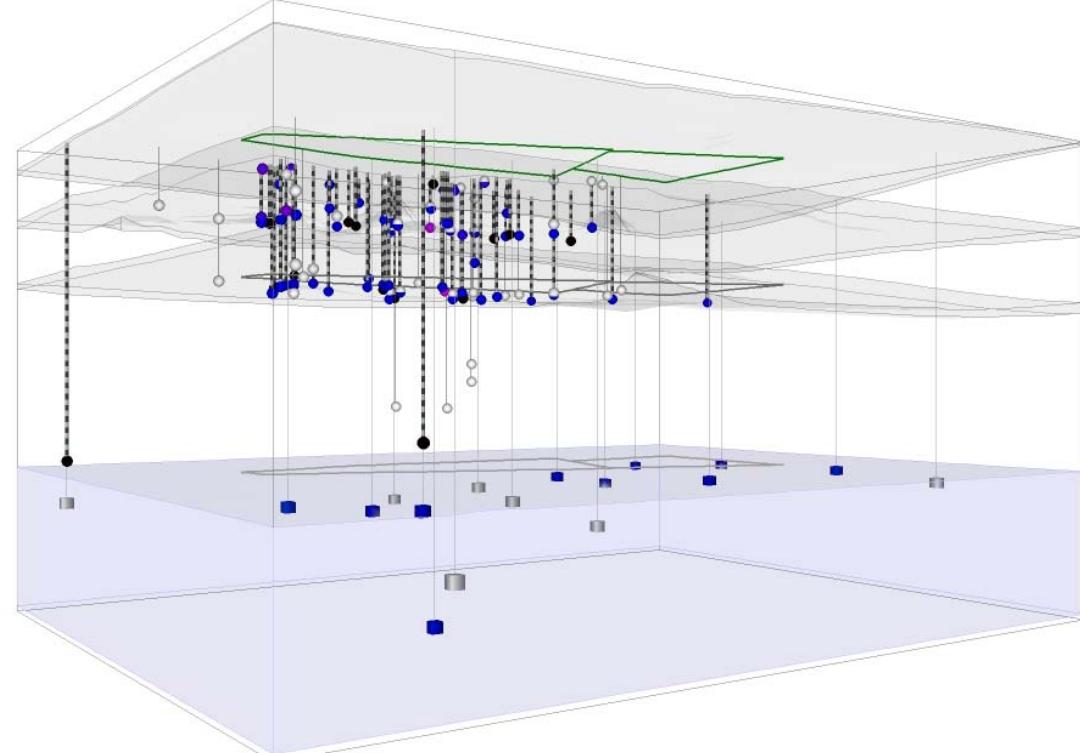
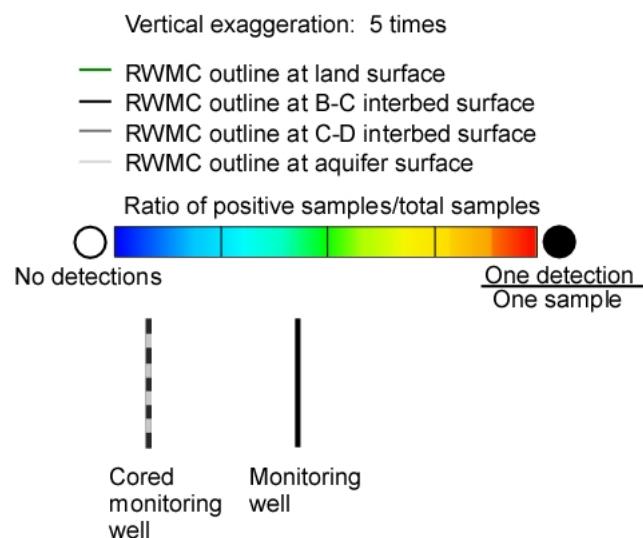
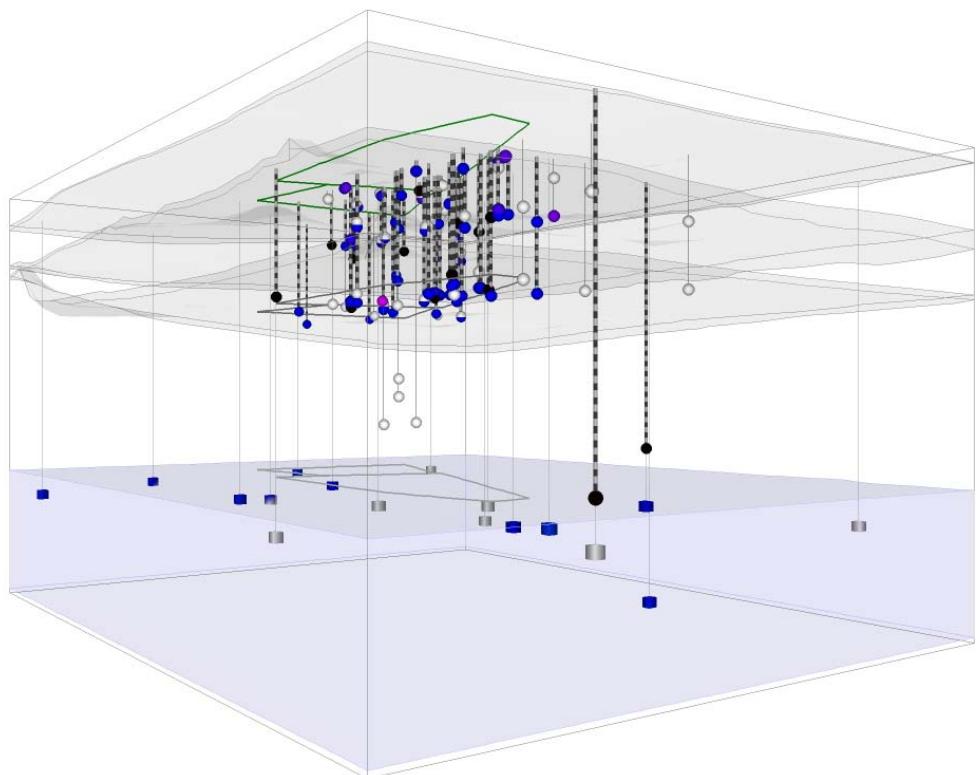
Ecological risk assessments conducted at the INL Site are based on the evaluation and interpretation of the nature and extent of contamination conducted for human health (Van Horn, Hampton, and Morris 1995). Samples have not been collected and analyzed to specifically address RWMC ecological receptors, and sampling data collected as part of the human health assessment were not analyzed in terms of nature and extent for individual ecological receptors (e.g., compared to ecologically based screening levels). However, results of INL Site biotic sampling conducted as part of INL Site environmental monitoring programs were used to assess transport of contaminants from the subsurface to surface soil, to locations outside the SDA, and into the food web.

The preliminary contaminant screening identified 56 Waste Area Group 7 ecological contaminants of potential concern (see Section 3.4.2). Of those, 14 also are contaminants of potential concern to human health (see Section 3.4.1). Contaminant screening identified 16 radionuclides, 23 inorganic chemicals, and 17 organic chemicals as ecological contaminants of potential concern (see Section 3.4.2).

4.28.8 Summary Figures

Figures 4-95 through 4-116 present summary information to illustrate the nature and extent of contamination associated with Operable Unit 7-13/14 contaminants of potential concern. Each figure shows the following:

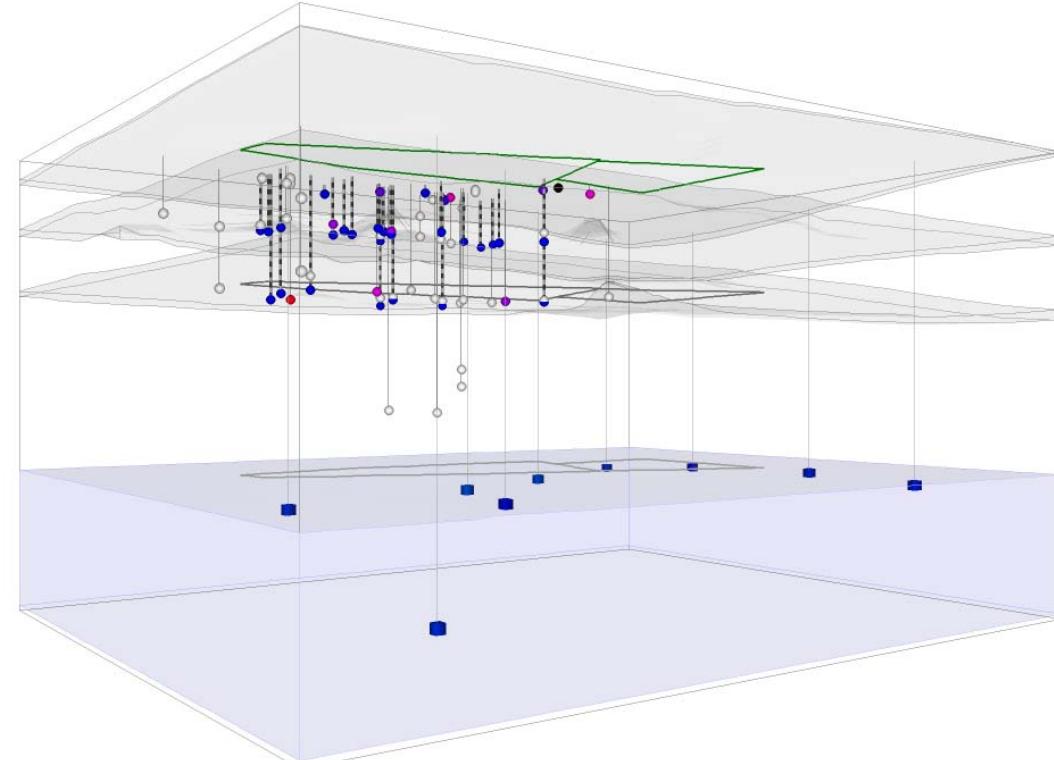
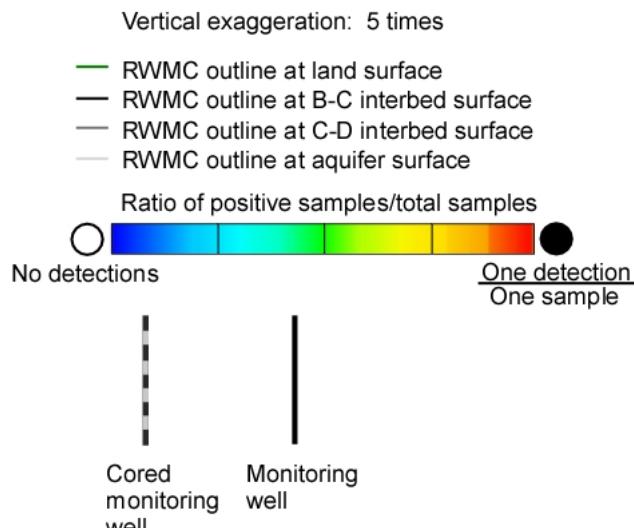
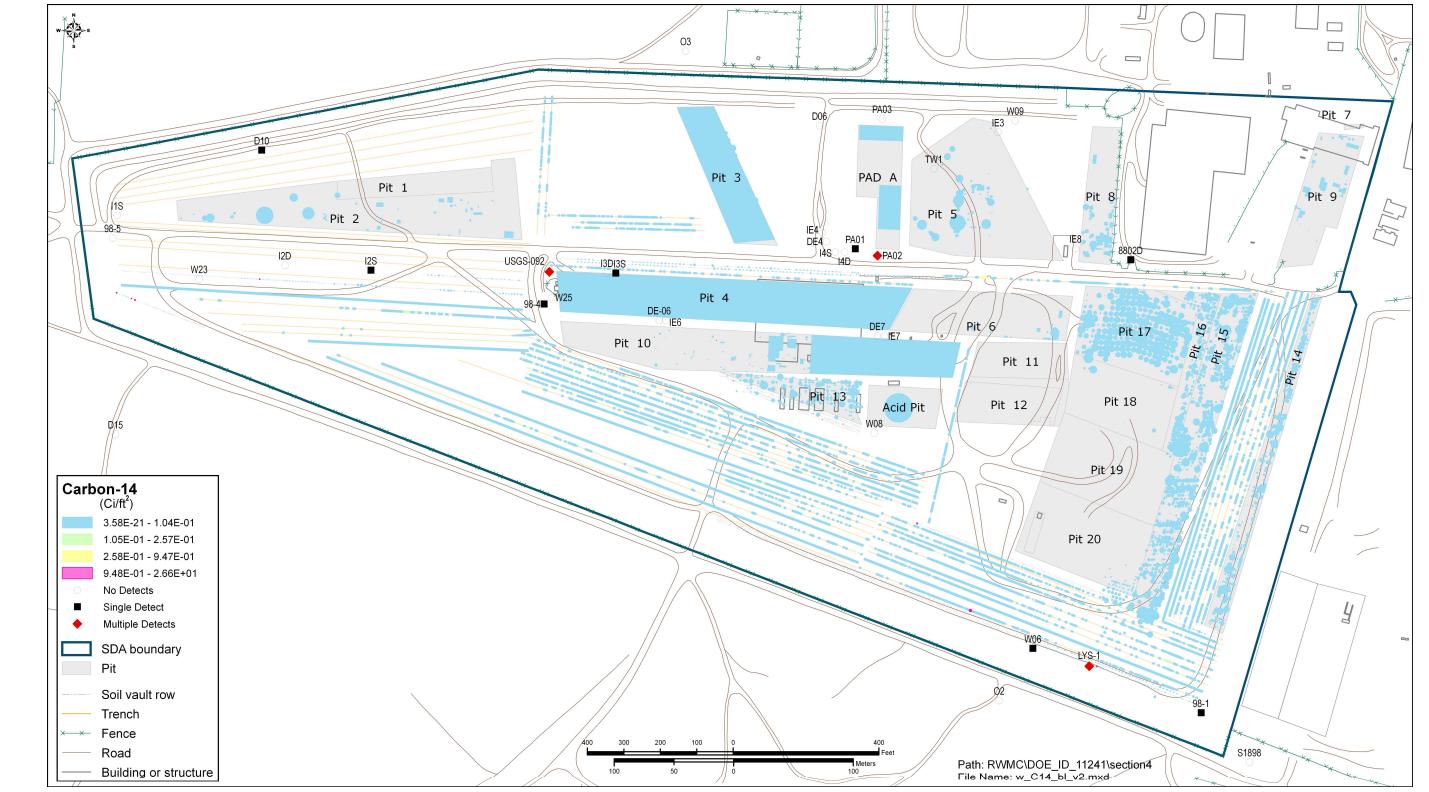
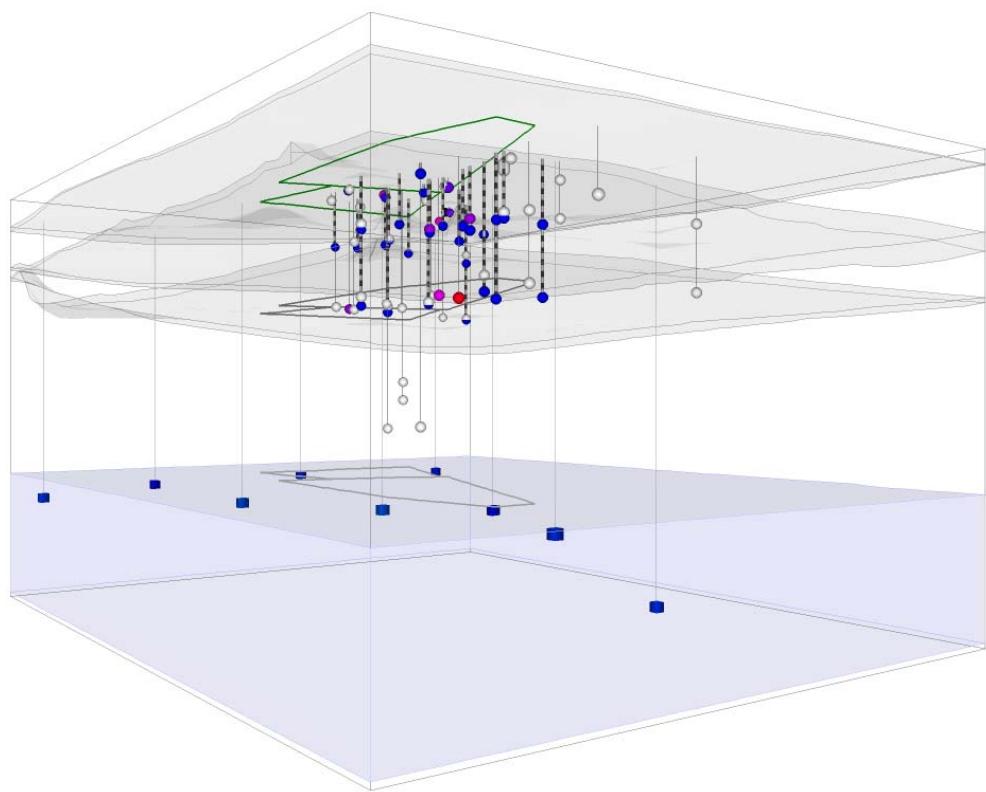
- Three-dimensional view oriented from south to north of detections in the vadose zone and aquifer
- Three-dimensional view oriented from west to east of detections in the vadose zone and aquifer
- Two-dimensional plan view of detections superimposed on inventory densities in the buried waste, for lysimeters and perched water only
- A table that describes waste streams contributing 1% or more of the total inventory, with remaining waste streams (i.e., those contributing less than 1%) listed collectively as miscellaneous.



Waste streams containing americium-241.

Waste Stream Code	Portion in Waste Stream (%)	Inventory (Ci)	Waste Stream Description
RFO-DOW-3H	82.1	1.89E+05	Uncemented sludge
RFO-DOW-4H	14.2	3.26E+04	Paper, rags, plastic, clothing, wood, and polyethylene bottles
RFO-DOW-12H	2.7	6.26E+03	Dirt, concrete, ash, and soot
RFO-DOW-6H	0.9	2.01E+03	Filters
Miscellaneous	0.1	3.02E+02	
Total Am-241	100.0	2.30E+05	

Figure 4-95. Plan view and three-dimensional views of americium-241 detections in vadose zone core, lysimeters, and the aquifer.



Waste streams containing carbon-14.

Waste Stream Code	Portion in Waste Stream (%)	Inventory (Ci)	Waste Stream Description
TRA-603-4N	46.0	3.36E+02	Core components
TRA-670-1N	12.7	9.31E+01	Beryllium waste
RTC	12.6	9.27E+01	Other RTC waste (see Table 4-4)
NRF	7.5	5.47E+01	Other NRF waste (see Table 4-4)
Materials and Fuels Complex	5.3	3.84E+01	Other Materials and Fuels Complex waste (see Table 4-4)
LLW	10.9	7.96E+01	Metals and resins
Miscellaneous	5.0	3.67E+01	Mostly activated metal
Total C-14	100.0	7.31E+02	

Figure 4-96. Plan view and three-dimensional views of carbon-14 detections in vadose zone core, lysimeters, and the aquifer.